

REMARKS

Status of the Claims

In accordance with the foregoing, claims 1-17 are pending and under consideration. It is respectfully submitted that the rejection is traversed.

Claim 16 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Rejections under 35 USC §103(a)

Claims 1-3, 5-9, and 11-15 are rejected under 35 USC 103(a) as being unpatentable over Applicant Admitted Prior Art (AAPA) in view of Kajiya et al. (7,092,643). Claim 17 is rejected under 35 USC 103(a) as being unpatentable over AAPA and Kajiya and further in view of Mikkelsen et al. and Griffin (2004/0081470).

Claims 1 and 17 recite "guides said time division multiplexed signal light, respectively, to a first optical gate section in which the transmittance thereof is periodically changed in accordance with a repetition frequency of "n" times a bit rate of a signal light of said plurality of signal lights (n is a positive integer greater than 2)."

Kajiya relates to a Mach-Zehnder (MZ) optical modulator that modulates an output optical signal based on a modulation signal. The MZ optical modulator outputs the output optical signal that is turned ON/OFF in proportion to the modulation signal. A modulation factor is set as a suitable bias voltage and is applied to the MZ optical modulator, an initial phase is set to 0, and a sinusoidal wave of a repetitive frequency is input as the modulation signal. Consequently, the output optical signal is "output as an optical signal that is turned ON/OFF in the repetitive frequency $2F_c$ that is two times the repetitive frequency." See col. 1, lines 18-65. The MZ optical modulator modulates the continuous wave light.

The AAPA relates to a configuration of a separating apparatus where the time division multiplexed signal light is branched into two and one branched light is supplied to a unit 100A on a clock extraction side, and the other branched light is supplied to a unit 100B on a time division separation side of the signal light. Units 100A and 100B are in common in the point of separating the time division multiplexed signal light of 160 Gb/s into 10 Gb/s signal light, and in each of the units 100A and 100B, two optical gates 101 and 102 each using the electro-absorption type optical modulator are serially connected.

The Examiner stated on page 11 that "the combination of AAPA and Kajiya does not disclose that the transmittance of the first optical gate is periodically changed in accordance with a repetition frequency of greater than 2 times the bit rate of the signal light"

In Fig. 1 of Mikkelsen, the TDM signal light inputted into "the first EA modulator" in a demultiplexer is obtained by multiplexing sixteen 20 Gb/s signal lights, namely, the bit rate of one signal light is "20 Gb/s", and a drive frequency of "the first EA modulator" is "40 GHz". See page 1400, right col., lines 305, page 1401, left col., line 22. The drive frequency of "the first EA modulator" is 4 times a drive frequency of "a second modulator". Since "n" of claims 1 and 17 is recited as "periodically changed in accordance with a repetition frequency of 'n' times a bit rate of a signal light of said plurality of signal lights", the disclosure of Mikkelsen is equivalent to "n=2".

Furthermore, Griffin, which is cited in combination with Mikkelsen, merely relates to an MZ intensity modulator. The AAPA, Kajiya, Mikkelsen, and Griffin fail to teach or suggest "periodically changed in accordance with a repetition frequency of 'n' times a bit rate of a signal light of said plurality of signal lights (n is a positive integer greater than 2)" (emphasis added).

Accordingly, claims 1 and 17 patentably distinguish over the cited art.

Claims 2-3, 5-9, and 11-15 depend from 1 and include all of the features of that claim, plus additional features that are not taught or suggested by the cited art and therefore patentably distinguish over the cited art.

Claim 4 is rejected under 35 USC 103(a) as being unpatentable over AAPA and Kajiya and further in view of Way (2002/0135838). Claim 4 depends from claim 1 and includes all of the features of that claim, plus additional features that are not taught or suggested by the cited art and therefore patentably distinguishes over the cited art. Furthermore, nothing has been found or cited in Way that cures the deficiencies in regards to the AAPA in view of Kajiya.

Claim 10 is rejected under 35 USC 103(a) as being unpatentable over AAPA and Kajiya and further in view of Kartalopoulos. Claim 10 depends from claim 1 and includes all of the features of that claim, plus additional features that are not taught or suggested by the cited art and therefore patentably distinguishes over the cited art. Furthermore, nothing has been found or cited in Kartalopoulos that cures the deficiencies in regards to the AAPA in view of Kajiya.

Conclusion

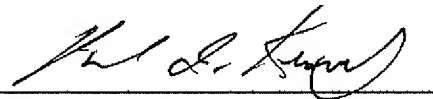
There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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